PATENT APPLICATION
Docket No. MS1-1011US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of		)
		)
	Baldwin et al	)
		)
Serial No.:	10/061,813	) Appeal No.
		)
Confirmation No.	1857	)
		)
Filed:	January 31, 2001	)
		)
For:	Table Arrangement of Sorted EPG Data to Facilitate Searching on Low Resource Clients	)
		)
Examiner:	Gillis, Brian J.	)

The Honorable Commissioner of Patents
Mail Stop Appeal Brief - Patents
P.O. BOX 1450
Alexandria, VA 22313-1450

BRIEF OF APPELLANT

The Applicant has filed a timely Notice of Appeal from the action of the Examiner in finally rejecting all of the claims that were considered in this application. This Brief is being filed under the provisions of 37 C.F.R. § 1.192. The Filing Fee, as set forth in 37 C.F.R. § 1.17(c), is submitted herewith.

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REAL PARTY IN INTEREST

The real party in interest is Microsoft Corporation, by way of assignment from Baldwin et al., who is the named inventive entity and is captioned in the present brief.

RELATED APPEALS AND INTERFERENCES

None.

STATUS OF CLAIMS

Claims 4, 9, 14-16, 18, 21 and 24 are pending. Claims 1-3, 5-8, 10-13, 17, 19, 20, 22 and 23-26 are cancelled by amendment being filed herewith to materially reduce and simplify issues for appeal.

STATUS OF AMENDMENTS

An amendment is being filed herewith in which Claims 1-3, 5-8, 10-13, 17, 19, 20, 22 and 23-26 are cancelled, leaving Claims 4, 9, 14-16, 18, 21 and 24 as pending. Claims 4, 9, 14-16, 18, 21 and 24 have been amended to be placed in independent form by amendment being filed herewith, thereby materially reducing and simplifying issues for appeal.

SUMMARY OF INVENTION

Program data for use in electronic program guides is sorted in advance of delivery to a low resource client. In the described implementation, the program data is sorted according to a parameter that is likely to be searched at the client, such as by program title, actor name, and so forth. In one example, the program data is sorted according to a stopped name version of the program title. When delivered to the client, the low resource client is able to perform fast binary searches on the sorted program data.

Independent claim 4 recites a method comprising:

storing program data for an electronic program guide in multiple tables, each table comprising one or more records with one or more fields and at least two said tables are related such that one said record in one said table indexes another said record in another said table, wherein the records comprise program records containing programming information, individual program records having a title field to identify a program name (e.g., FIG. 5, reference number 502; page 12, lines 3-6); and

sorting the records in the tables according to a selected field type prior to delivery of the program data to a remote client and the sorting comprises arranging the program records in the tables according to a stopped name version of the program name in the title field (e.g., FIG. 5, reference number 504; page 12, lines 7-20).

Independent claim 9 recites a method for delivering program data for an electronic program guide executing at a remote client, the method comprising:

storing program data for an electronic program guide in multiple tables, the tables comprising one or more program tables with records of programming information, the program tables having a title field for program titles, and one said record in one said table indexes another said record in another said table (e.g., FIG. 5, reference number 502; page 12, lines 3-6);

sorting the records in the program tables according to the title field, wherein the sorting comprises arranging the records according to stopped name versions of program names in the title field (e.g., FIG. 5, reference number 504; page 12, lines 7-20); and

constructing a data file to hold the tables (e.g., FIG. 5, reference number 506; page 13, lines 3-12).

Independent claim 14 recites a computer-readable medium comprising computer-executable instructions that, when executed, direct a computing system to:

sort program data for an electronic program guide according to stopped names of program titles (e.g., FIG. 5, reference number 504; page 12, lines 7-20); and

store the program data in a data structure for delivery to a remote client (e.g., FIG. 5, reference number 506; page 13, lines 3-12).

Independent claim 16 recites a data structure stored on a computer-readable medium (e.g., FIG. 3, reference numbers 310-314; page 8, line 18 to page 9, line 6), comprising:

multiple tables to store program data for use in an electronic program guide (e.g., FIG. 4, reference numbers 402(1)-402(p); page 9, lines 9-15);

the tables comprising program tables composed of records with programming information, the program tables having a title field to hold program titles (e.g., FIG. 4, reference numbers 402(1)-402(p); page 9, lines16-23); and

the records of the program tables being sorted by stopped name versions of the program titles (e.g., FIG. 5, reference number 504; page 12, lines 7-20).

Independent claim 18 recites a computer system (e.g., FIG. 2, reference number 110), comprising:

a memory (e.g., FIG. 2, reference number 204; page 5, line 25));

a processor coupled to the memory (e.g., FIG. 2, reference number 202; page 5, line 25); and

a data sorter program (e.g., FIG. 2, reference number 222; page 7, lines 1-5) stored in memory and executed on the processor to sort electronic program guide (EPG) data according to a data type into records arranged in multiple tables, at least two said tables are related such that one said record in one said table indexes another said record in another said table, prior to delivery of the EPG data to a remote client, wherein the data type is a program

title, and the data sorter program is configured to sort the EPG data according to a stopped name version of the program title (e.g., FIG. 5, reference number 504; page 12, lines 7-20).

Independent claim 21 recites a processing system, comprising:

sorting means for sorting program data for an electronic program guide according to a data type that a viewer is likely to search, wherein the program data is sorted into multiple tables, at least one said table includes a record that indexes a record in another said table, wherein the sorting means sorts the program data according to stopped names of program titles (e.g., FIG. 2, reference number 222; FIG. 5, reference number 504; page 12, lines 7-20); and

transmission means for transmitting the sorted program data to the client (e.g., FIG. 1, reference number 124; page 5, lines 5-11).

Independent claim 24 recites a television entertainment system, comprising:

multiple clients to receive television signals and corresponding program data for an electronic program guide (EPG), individual clients having a search engine to search the program data (e.g., FIG. 1, reference number 130(1)-130(c); page 12, lines 12-21); and

an EPG server to sort the program data prior to delivery to the client, the program data being sorted according to a selected parameter to place the program data in a sorted arrangement to facilitate searching at the client, wherein the sorted arrangement includes a

record for the selected parameter that indexes another record for another parameter, wherein the EPG server sorts the program data according to stopped name versions of program titles (e.g., FIG. 2, reference number 110; page 5, line 24 to page 7, line 23).

GROUNDS OF REJECTION

1. Claims 4, 9, 14-16, 18, 21 and 24 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Printed Patent Application No. 2002/0059623 to Rodriguez et al (hereinafter "Rodriguez").

ARGUMENT

Ground of Rejection Claims 4, 9, 14-16, 18, 21 and 24 satisfy the requirements of 35 U.S.C. § 103(a) and therefore are not unpatentable over Rodriguez.

The pending claims have been simplified such that each of the pending independent claims recites a "stopped name" version of a title, which was addressed by the Examiner in reference to Claim 14. Accordingly, this argument initially addresses the rejection of Claim 14.

Claim 14 recites a computer-readable medium comprising computer-executable instructions that, when executed, direct a computing system to:

- sort program data for an electronic program guide according to stopped names of program titles; and
- store the program data in a data structure for delivery to a remote client.

These features are not disclosed, taught or suggested by the references of record, alone or in combination.

The Examiner, in rejecting this claim correctly states that "Rodriguez fails to teach the sorting of the name in the title field as a form of a stopped name version of the program name in the title field". *Office Action Dated March 11, 2005, Page 5.* However, the Examiner then incorrectly asserts the following:

> The stopped name version of the program name in the title field can be interpreted as the name in the title field (page 13, paragraph [0091]). At the time the invention was made, it would have been obvious to one of ordinary skill in the art to sort the program records according to the name in the title field in order to coalesce program data sets into one, and organize

> into a format suitable for reception and interpretation by the EPG application running on the digital home communication terminal. *Office Action Dated March 11, 2005, Page 5.*

This is not the case. The portion of Rodriguez asserted by the Examiner is excerpted as follows for the sake of convenience:

> [0091] EPG data typically spans program information for the complete channel line-up, be it hundreds or possibly thousands of channels, for a pre-specified time-window (e.g., 14 or 30 days). An individual service (e.g., NBC, HBO, Video-On-Demand, Email) is typically associated with each channel. Since the duration of programs vary and is typically from 30 minutes to 150 minutes, a channel could possibly offer 48 programs per day. If program durations are as short as five minutes, this could result in over 100 programs per day. Considering the number of programs per day for each channel, the number of channels, and the number of days of program information, the EPG data can demand an amount of memory that surpasses the typical memory limits of a low-cost, high-volume subscriber device. Alternatively, depending on the processor capabilities of the DHCT 14, it may be more efficient to perform sorting operations on the EPG data at the headend 26. In such embodiments the EPG Server 220 (FIG. 3A) or BFS server 228 includes EPG data for multiple sorts such as program theme or title, all of which can be simultaneously accessed and downloaded into a DHCT 14. In such a configuration, the memory requirements for the EPG database are much greater. *Rodriguez , Paragraph 91.*

Although the above referenced portion mentions EPG data for a title, the asserted portion makes no mention whatsoever of a "stopped names of program titles" as recited in claim 14.

Beginning at page 12 of the subject application, an exemplary use of stopped names is discussed. For example, in one implementation, the data sorter 222 arranges

EPG data in the program tables alphabetically according to the "stopped name" of the program. The "stopped name" of a program is the shortened version of the program title that contains the identifying words, without common joiner words such as "the", "and", etc. For example, the movie "The Good, The Bad, and The Ugly" might have a stopped name of "Good, Bad, Ugly" and the program "How the West was Won" might have a stopped name of "West Won".

Rodriguez does not teach or suggest anything beyond the mention of a title, which is contrary to the Examiner's assertion of a relationship between names and titles. It should also be noted that this asserted relationship by the Examiner does not appear in Rodriguez. Further, contrary to the Examiner's assertion, Rodriguez does not include motivation as to why such a sorting arrangement would be desirable, e.g., Rodriguez does not teach or suggest that the title is insufficient. Indeed, the Examiner seems to agree. The Examiner asserts that "[Rodriquez] fails to teach of sorting the name in the title field as a form of a stopped name version". *See Office Action Dated October 19, Page 10.* The Examiner then makes the unsupported assertion that at "the time of the invention it would have been obvious to a person of ordinary skill in the art to sort the records according to the name in the title field in order to coalesce program data sets into one and to organize it into a format suitable for reception and interpretation by the EPG application running on the digital home communication terminal." *Id.* The Examiner, however, does not provide any support whatsoever for this assertion, which is especially notable because the Examiner admits that such a teaching cannot be found in Rodriguez.

It is respectfully submitted that absent the present Application, Rodriguez does not teach or suggest the above recited features, including "stopped names of program

titles". Accordingly, a *prima facie* case of obviousness has not been established, and the Applicant respectfully request that the rejection with respect to claim be overturned.

Claim 15 depends directly from claim 14 and is allowable as depending from an allowable base claim. This claim is also allowable for its own recited features which, in combination with those recited in claim 14, are neither shown nor suggested in the references of record, either singly or in combination with one another.

Claim 4 recites in part "sorting comprises arranging the program records in the tables according to a stopped name version of the program name in the title field". **Claim 9** recites in part "sorting the records in the program tables according to the title field, wherein the sorting comprises arranging the records according to stopped name versions of program names in the title field". **Claim 16** recites in part "records of the program tables being sorted by stopped name versions of the program titles". **Claim 18** recites in part a "data sorter program is configured to sort the EPG data according to a stopped name version of the program title". **Claim 21** recites in part "wherein the sorting means sorts the program data according to stopped names of program titles". **Claim 24** recites in part "wherein the EPG server sorts the program data according to stopped name versions of program titles". These features are not taught or suggested by Rodriguez.

The Examiner, in rejecting these claims, again asserts Rodriguez at paragraph [0091] for support of "stopped name version of the program titles". As previously described in relation to claim 14, however, although Rodriguez mentions EPG data for a title, Rodriguez does not teach or suggest anything more beyond the mention of a title. Indeed, the Examiner even admits that "[Rodriquez] fails to teach of sorting the

name in the title field as a form of a stopped name version". *See Office Action Dated October 19, Page 10.* It is respectfully submitted that absent the present Application, Rodriguez does not teach or suggest the above recited features, including "stopped name versions of program titles" as recited in claim 16. Accordingly, a *prima facie* case of obviousness has not been established, and the Applicant respectfully requests that the rejection of Claims 4, 9, 14-16, 18, 21 and 24 be overturned.

CONCLUSION

The Applicant respectfully considers this application to be in condition for allowance and respectfully requests the Board to overturn the final rejection and that the Examiner pass this application to allowance.

Dated this 20th day of March, 2006.

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APPENDIX: CLAIMS ON APPEAL

Claims 1-3 (cancelled).

4. A method comprising:

storing program data for an electronic program guide in multiple tables, each table comprising one or more records with one or more fields and at least two said tables are related such that one said record in one said table indexes another said record in another said table, wherein the records comprise program records containing programming information, individual program records having a title field to identify a program name; and

sorting the records in the tables according to a selected field type prior to delivery of the program data to a remote client and the sorting comprises arranging the program records in the tables according to a stopped name version of the program name in the title field.

Claims 5-8 (cancelled).

9. A method for delivering program data for an electronic program guide executing at a remote client, the method comprising:

storing program data for an electronic program guide in multiple tables, the tables comprising one or more program tables with records of programming information, the

program tables having a title field for program titles, and one said record in one said table indexes another said record in another said table;

sorting the records in the program tables according to the title field, wherein the sorting comprises arranging the records according to stopped name versions of program names in the title field; and

constructing a data file to hold the tables.

Claims 10- 13(cancelled).

14. A computer-readable medium comprising computer-executable instructions that, when executed, direct a computing system to:

sort program data for an electronic program guide according to stopped names of program titles; and

store the program data in a data structure for delivery to a remote client.

15. A computer-readable medium as recited in claim 0, further comprising computer-executable instructions that, when executed, direct a computing system to deliver the data structure to the remote client.

16. A data structure stored on a computer-readable medium, comprising:

multiple tables to store program data for use in an electronic program guide;

the tables comprising program tables composed of records with programming information, the program tables having a title field to hold program titles; and

the records of the program tables being sorted by stopped name versions of the program titles.

Claim 17 (cancelled).

18. A computer system, comprising:

a memory;

a processor coupled to the memory; and

a data sorter program stored in memory and executed on the processor to sort electronic program guide (EPG) data according to a data type into records arranged in multiple tables, at least two said tables are related such that one said record in one said table indexes another said record in another said table, prior to delivery of the EPG data to a remote client, wherein the data type is a program title, and the data sorter program is configured to sort the EPG data according to a stopped name version of the program title.

19. (cancelled).

20. (cancelled).

21. A processing system, comprising:

sorting means for sorting program data for an electronic program guide according to a data type that a viewer is likely to search, wherein the program data is sorted into multiple tables, at least one said table includes a record that indexes a record in another said table, wherein the sorting means sorts the program data according to stopped names of program titles; and

transmission means for transmitting the sorted program data to the client.

Claims 22-23 (cancelled).

24. A television entertainment system, comprising:

multiple clients to receive television signals and corresponding program data for an electronic program guide (EPG), individual clients having a search engine to search the program data; and

an EPG server to sort the program data prior to delivery to the client, the program data being sorted according to a selected parameter to place the program data in a sorted arrangement to facilitate searching at the client, wherein the sorted arrangement includes a record for the selected parameter that indexes another record for another parameter, wherein

the EPG server sorts the program data according to stopped name versions of program titles.

Claims 25-26(cancelled).

APPENDIX: EVIDENCE

None.

APPENDIX: RELATED PROCEEDINGS

None.